

## ProteoSolve-IEF Reagent (KIEF-01)

### Product Description

ProteoSolve-IEF is designed to solubilize many types of proteins during sample preparation for a variety of analytical techniques, including isoelectric focusing (IEF) and gel- or solution-phase protein fractionation. This reagent contains powerful chaotropic agents and a zwitterionic detergent.

### The kit has two components:

IEF Reagent---dry powder form: makes 100 mL upon reconstitution with HPLC deionized water.

Ion Exchange Resin—3 g: when mixed with reconstituted IEF Reagent, removes conductive ions during incubation to make a standardized low conductivity reagent.

The final solution contains **7.0 M urea**, **2.0 M thiourea**, and **4.0% CHAPS**.

### Instructions for Use

1. To reconstitute ProteoSolve-IEF Reagent, add **54 mL of HPLC grade water** to the **IEF Reagent Bottle** and mix until completely dissolved.

The container may be heated to 30° C to speed dissolution.

**WARNING: Avoid excessive heating to prevent decomposition of urea leading to carbamylation of proteins!**

ProteoSolve-IEF Reagent is compatible with the Bradford protein assay prior to addition of reducing reagent.

2. For best results, ProteoSolve-IEF Reagent should be ion-exchanged upon reconstitution (optional, but recommended):

After reconstitution, transfer contents of the **IEF Reagent Bottle** to the **Ion Exchange Resin Bottle**.

Incubate with gentle agitation for at least one hour at room temperature (not to exceed 30° C).  
(Avoid refrigeration at this stage to prevent crystallization of urea.)

Optionally, filter using a 0.47 µm microporous filter (Millipore Millex brand, or equivalent) before use.  
Conductivity of the ion-exchanged reagent should be 10-20 µS/cm.

3. At this point, optional reducing reagents and protease inhibitors may be added to ProteoSolve-IEF.
4. Store unused reagent at **-20° C** in convenient size aliquots.

Thaw frozen aliquots of ProteoSolve-IEF at room temperature  
Mix well, making sure the contents are completely dissolved before use.

(A water bath can be used to accelerate thawing, but temperature should not exceed 30° C).

Multiple freeze/thaw cycles generally will not affect the reagent performance.

**WARNING:** Use standard laboratory precautions including gloves, safety glasses, and the appropriate laboratory clothing when handling this reagent. Avoid breathing the dust--do not transfer the dry reagent to other containers. Use an approved respirator when necessary. MSDS is available upon request.

**DISCLAIMER:** Pressure BioSciences, Inc. assumes no liability for losses, either personal injury, mechanical damage, or loss of scientific data, that may occur as a result of inappropriate usage of the materials contained herein.

### References:

1. Molloy, M.P., et al., Electrophoresis, 19, 837-844 (1998).
2. Herbert, B.R., Electrophoresis, 19, 845-851 (1998).
3. Rabilloud T., Electrophoresis, 19(5), 758-60 (1998, May).
4. Rabilloud T., Methods Mol Biol. 2009; 528:259-67.